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Schedules- Part 5

PART5—Structural Stability
Sub Part I—General Application

In this Part unless the context otherwise requires—"beam" includes purlins, joist, rafter, rib or truss;"dead load" means the force due to the static mass of all walls, partitions, floors, roofs and finishes including all other permanent construction;"floor" includes any part of a floor to be used as a corridor and any balcony used in connection with the floor;"imposed load" means the load assumed to be produced by the intended occupancy or use including distributed, concentrated, impact and inertia loads, but excludes wind loads;"plan area" in relation to a floor, ceiling or roof means the area of the floor, ceiling or roof measured on the plan;"slab" includes boarding, roof dealing and any beams which are spaced apart at a distance of not less than one metre between centre;"wind load" means all loads due to the effect of wind pressure or suction.

Buildings and their structural parts including formwork or requirements.

1. be fire-resisting; and
2. be capable of safely sustaining and transmitting—
3. the dead loads;
4. imposed loads;
5. horizontal; and
6. inclined forces that may reasonably be expected to act on them without exceeding the appropriate limits of stress for the materials of which it is constructed and without undue deflection having regard to the expected service life of the building or structure.

For the purpose of determining the load to which a building shall be subjected—dead load shall be calculated in accordance with BSCP3; Chapter V: Part 1 of 1967; imposed loads shall be calculated— in accordance with BSCP3 Chapter V Part I of 1967; or in the case of the imposed load on a floor, ceiling or roof of a house that has not more than three storeys and intended for occupation by one family only, either in accordance with BSCP3: chapter V: Part 1 of 1967 or in accordance with the provisions of regulation 35, except that, if any actual imposed load will exceed or is likely to exceed the load so calculated, the actual load shall be substituted for the load calculated; and wind loads shall be calculated in accordance with BSCP3: Chapter V Part 2 of 1970 provided that—

1. in no case shall the factor of safety be taken as less than 1; and
2. if a building falls outside the range of those for which that code gives force, pressure co-efficients values shall be used which are appropriate in relation to that building, having regard to its construction, size, proportions, shape, profile and surface characteristics.

The imposed load on any floor, ceiling or roof of a house that has not more than three storeys and intended for occupation by one family only may be taken to be equivalent to a uniformly distributed load per square metre of plan area of not less than 1.44 KN/M², in the case of a floor or a roof to which there is access other than access for maintenance or repair purposes but—

1. if it causes greater stress than the load, there shall be substituted for that load, in the case of a slab 3.5K.N per metre width of slab uniformly distributed over the span of the beam; and 8.5 KN uniformly distributed over the span of the beam; and where the slab or beam forms part of a cantilever balcony, the projection of the cantilever shall be regarded as the span in the case of a ceiling, 720N/m²; or in the case of a roof (whether Hat or pitched) to which there is only such access as may be necessary for the purposes of maintenance or repair, 720N/m² less 50N for every 3 degrees by which the pitch exceeds 30 degrees.

Drawings submitted with application to build shall indicate— (a) the name and address of the person responsible for the structural design; (b) the code of practice or standard to which the design conforms; (c) the dimensions, location and size of all structural members in sufficient detail to enable the design to be checked; (d) sufficient detail to enable the loads due to materials construction incorporated in the building to be determined; (e) all effects and loads other than dead loads used in the design of structural members; and (f) all intended uses and occupancies. (2) The designs shall be signed by the person responsible for the design.

The calculations and analysis made in the design of the structural members, including parts and components of a building shall be made available upon request for inspection by the District Planning Authority.

1. All loadbearing walls and cross walls shall have continuous reinforced concrete

More Info:

- First To Seventh Schedule
- Schedules
- Schedules- Part 1 & 2
- Schedules- Part 3 & 4
- Schedules- Part 5
- Schedules- Part 6 & 7
- Schedules- Part 8, 9 & 10
- Schedules- Part 8, 9 & 10
- Schedules- Part 11, 12 & 13
- Schedules- Part 14, 15 & 16
- Schedules- Part 17, 18 & 19

View Links:

- Chieftaincy Act, 1971
- Ghana Investment Promotion
- Human Trafficking
- **Local Government Act**
- Minerals And Mining
- Narcotic Drugs
- National Building Regulations
- National Identification Act, 2006
- National Labour Commission Regulations, 2006
- Pndc Law
- Presidential Commission
- Trade Policy
- W/ African Gas Pipeline Act, 2004

- ties or ringbeams at each floor and at the roof. Such ties shall be of the full width of the wall and not less than 225mm in concrete ties, depth.
2. The amount of steel shall not be less than 0,8 per cent of sectional area of the concrete required by this regulation and the steel shall be in the form of not less than four rods at the four corners of the band and any additional rods shall be placed at intermediate positions on the sides.
 3. The reinforcements shall be hooped at intervals of not more than 300mm with 8mm round steel rods and where wall plates are used, the plates shall be bolted to the continuous ties with at least 12mm diameter steel bolts properly anchored into the ties at not more than 200mm centres.
 4. Where groups of doors or window openings are of less distance than the width of the openings apart, lintels shall be made continuous over the series. In cement block, brick or other masonry walling there shall be no opening distance of less than 450mm from any external angle of the walls.
 5. All lintels shall be reinforced in accordance with openings in walls of any storey and shall not constitute more than one-third of the length of the wall, unless the walls are proportionately thickened or adequately framed or other precautions are taken which in the opinion of the District Planning Authority ensure the stability of the structure.
 6. All applied or non-structural finishes, cornices, balustrading and ornamental details, whether of the exterior or interior of a building, shall be securely and permanently attached to the structure so as to form an integral part of it.
 7. For the purpose of design in the earthen materials shown, the materials shall be considered as masonry walling and the characteristic strength of materials used in the design shall be based on the recommendations of the Ghana Standards Specifications for the Production and use of Stabilised Soil Blocks and Line Construction.
 8. In foundations for buildings of three or more storeys, the District Planning Authority may request soil tests to determine the appropriate bearing capacity of the soil.
 9. Buildings and other structures shall be designed and constructed to safely resist earthquake effects or seismic forces in accordance with the relevant provisions of the British Standard Code of Practice or the equivalent Ghana standards.
 10. For foundations in earthquake areas, the District Planning Authority may request detailed calculations and structural drawings to accompany applications for development approval.
 11. The foundations of a building shall—Requirements
 - safely sustain and transmit to the ground the combined foundations of dead load, imposed load and wind load in such a manner buildings. as not to cause any settlement or other movement which would impair the stability of, or cause damage to the whole or any part of the building or of any adjoining building or works;
 - be taken down to such a depth or be so constructed as to safeguard the building against damage by swelling or shrinking of the subsoil; and
 - be capable of adequately resisting any attack by sulphates or any other deleterious matter present in the subsoil.

The requirements of subregulation of this regulation shall be regarded as satisfied if— the foundations of a building are constructed in accordance with the relevant recommendations of BSC; Civil Engineering Code of Practice No.4 —"Foundations";where reinforced concrete foundations are required for any part of the construction, the work complies with CP114:Part2 1969; where foundations form part of a building with not more than four storeys (other than a factory or storage building), the foundations are constructed in accordance with BSCP101: 1963; or(d) where the foundations of a building are constructed as strip foundation of plain concrete and situated centrally under the walls—there is no made ground or wide variation in the type of subsoil within the loaded area and no weaker type of soil exists below the soil on which the foundations rest within such a depth as may impair the stability of the structure;(ii) the width of the foundations is not less than the width specified in the table in Schedule 4 to these Regulation in accordance with the related particulars specified therein;(iii) the concrete is composed of cement and fine and coarse aggregate conforming to BS882: 1965 in the proportion of 50kg of cement to not more than 0.1 m³ of fine aggregate and 0.2m³ of coarse aggregate; (iv) the thickness of the concrete is not less than its projection from the base of the wall or footing and is in no case less than 150mm;(v) where the foundations are laid at more than one level, at each change of level the higher foundations extend over and unite with the lower foundation for a distance of not less than the thickness of the foundations and in any case, not less than 300mm; and where there is a pier, buttress or chimney forming part of a wall, the foundations project beyond the pier, buttress or chimney on all sides to at least the same extent as they project beyond the wall.

The structure of a building above the foundations shall safely sustain and transmit to the foundations the combined dead load, imposed load and wind load without such deflection or deformation as will impair the stability of or cause damage to the whole or any part of the building. The requirement of subregulation of this regulation shall be regarded as satisfied as to any structural work of steel if the work complies with BS449: Part 2: 1969 or a comparative Ghana Standards specification. Subject to subregulation of this regulation, the requirements of sub-regulation shall be regarded satisfied as to any structural work in one of the principal or supplementary aluminium alloys designated in section 1.1 of CP 118 publication. For the purposes of section 5.3 of CP shall be classified as safe-life structure. The requirements of subregulation shall be considered satisfied as to—any structural work of reinforced concrete if the work complies with CP114: Part 2: 1969; or any structural work of prestressed concrete if the work complies with CPI15: Part 2: 1969; or any structural work of precast concrete if the work complies with CPI 16: Part 2: 1969; or any structural work of timber if—the work complies with CP112: 1952: or CP112 Part 2: 1967; or in the case of work comprising a floor, ceiling or roof of a house with

not more than three storeys and intended to be occupied by one family only, and including any timber member within the meaning of Schedule 5 that member complies with the rules set out in that Schedule, and the work in all other respects complies with CP112: 1952, or CPI 12: Part I: 1967.

Any members of the structure which are susceptible to insect or other bacterial agent attacks shall be treated to comply with the requirements in Schedule 4 of these Regulations. The requirements of subregulation shall be considered satisfied as to—any structural work of bricks, blocks or plain concrete if—the work complies with CP111: Part 2: 1970; or in the case of work comprising a wall constructed of bricks or blocks to which Schedule 6 applies the wall is constructed in accordance with the rules of that Schedule; any wall constructed of stone, Hints, clutches of bricks or other burnt or vitrified material, if the wall is one to which Schedule 6 applies and it is constructed in accordance with the rules of that Schedule; any wholly external part of a chimney or similar structure constructed of bricks, blocks or plain concrete which is not supported by adequate ties or otherwise made secure if, at the level of the highest point in line or junction with the roof, gutter or other part of the building and at any higher level, the width of the chimney or structure is not less than one sixth ($\frac{1}{6}$) of its height measured from that level to the top of the external part, including (in the case of chimney) any pot or other flue terminal.

For the purposes of paragraph of this subregulation, the width of a chimney or similar structure at any level shall be taken as the small width which can be shown on the elevation of the chimney or structure from any direction. The requirements of regulation 45 shall be considered to be satisfied as to any composite construction in structural steel and concrete if the work complies with CP117: Part 1 1965. Sub Part II—Additional Structural Requirements for certain Buildings. The structural requirements specified in this sub-part shall apply building with five or more storeys (including basement storeys if any) in addition to the provisions in sub-part 1. In this Sub-Part—"portion" in relation to a structural member, means that part of a member which is situated or spans between adjacent support or between a support and the extremity of a member; provided that, in the case of a wall, a portion shall be taken to have a length which is the lesser of the following, namely, the length determined in accordance with the preceding provisions of this definition or two and a quarter times the height of the portion (or, if its height varies, its greatest height); "storey" means that part of a building which is situated between either—the top surfaces of two vertically adjacent floors of the building; or the top surfaces of the uppermost floor and the roof covering of the building; "structural member" means a member essential to the structural stability of a building; "structural failure" means the failure of a structural member fully to perform its function in contributing to the structural stability of the building of which it forms part.

Dead load and imposed load shall be determined in accordance with regulation 35(2) provided that the imposed load on any structural member may be reduced by not more than two thirds for the purpose of regulation 35 but provided further that—any load especially allowed for plant, machinery or equipment shall not be reduced; in the case of a warehouse, garage or building for storage purposes, no reduction shall be made; and in the case of a factory or workshop, the load shall not be reduced below 5KN/m². Wind load may be taken as not less than one third of the load determined in accordance with regulation 35 and the load which would cause structural collapse shall exceed the combined dead load, imposed and wind load on the structure together with the loads specified in subregulation by at least 5%.

A building to which this sub-part applies shall be so constructed that if any portion of any one structural member, other than a portion which satisfies the conditions specified in subregulation, were to be removed—Structural failure consequent on that removal would not occur within any storey other than the storey of which that portion forms part, the storey next above, if any, and the storey next below, if any; and any structural failure would be localised within each storey.

The conditions referred to in subregulation of this regulation are that the portion should be capable of sustaining without structural failure the following loads applied simultaneously—the combined dead load, imposed load and wind load; a load of 34 KN/m³ applied to that portion from any direction; and the load, if any, which would be directly transmitted to that portion by any immediately adjacent part of the building if that part were subject to a load of 34KN/m² applied in the same direction.

The requirements of subregulation of this regulation shall be considered satisfied if the area within which structural failure would occur would not exceed 70nr or 15% of the area of the storey measured in the horizontal plane, whichever is the less. Subject to subregulation of this regulation the requirements relating to the localisation of structural failure shall be satisfied in the case of a building which utilises precast concrete loadbearing wall panels of not less than one storey in height if the work complies with CP116: Part 2: 1969. For the purposes of CP116: Addendum No. 1: 1970 the building to which this sub-part applies shall be classified as a Group I structure.

Sub-Part III—Beams, Scaffolding, Roof-General Application

Where piles or columns are used to support the whole or part of a building, their tops shall be joined by beams which shall be capable of supporting their own weight and all imposed loads without failure or beams for undue deflection. All beams shall be securely fixed to the tops of the piles or columns supporting them. Beams shall be reinforced concrete or pressed or rolled steel except that timber beams may be used where—a wall supported wholly or partly by the beam is wood framed; or floor supported wholly or partly by the beam is raised timber floor; or the load carried consists only of part of the roof; or it is fixed to each support by a bolt not less than 12mm diameter and built at least 225mm into the support with a washer of at least 37mm diameter and a nut and each is of solid timber or made up of two or more pieces of 50mm timber on edge nailed or otherwise fixed together in an approved manner with joints in solid timber beams as over supports and joints in component pieces of laminated beams not fixed within 300mm of one another.

The design and construction of hoarding, scaffolding and other temporary structures shall comply with regulation 35 on general load-bearing structures. All hoardings whether used for enclosing a building in the course of construction or for

any other purpose shall be constructed of approved materials. If in the opinion of the District Planning Authority a construction work may constitute a source of danger to the public, it may request the works to be enclosed in a hoarding. In all construction works where work is carried out at height above ground and requires the use of scaffolding, the scaffolding shall comply with the provisions of the Factories, Shops and Offices Act, 1970. (Act 328). The framing of roofs shall be sufficiently strong to carry its own weight and all imposed loads without failure or undue deflection, and it shall transmit the weight and load safely to the walls or beams which support it. The individual members of the framing shall be securely fixed together and the whole be adequately secured to the walls or beams supporting it.

The framing shall be of squared timber; or metal; or a combination of metal and timber; or reinforced concrete. The slope of the roof shall comply with the requirements of this regulation. Where the covering consists of corrugated galvanised iron or aluminium sheeting, the timber framing shall satisfy subregulation (1) of this regulation. For monopitch roofs with sloping rafters the framing shall consist of wall plates, rafters, and purlins. The wall plates supported by walls shall be fixed along the middle of the wall and shall be at least 100mm by 50mm. Wall plates supported by corbels or columns shall be at least 100mm by 75mm timber where the span is not greater than 1.8m. For longer spans the size shall be decided by the District Planning Authority. Wall plates shall be securely fixed to walls or corbels with 12mm bolts fixed not more than 1.8m apart.

Each rafter shall consist of one piece of timber and should be not less than—

1. 100mm by 50mm;
2. 115mm by 40mm for spans up to 3200mm; or
3. 150mm by 50mm for spans up to 4300mm.
4. Rafters shall be firmly fixed to wall plates.

For all pitched roofs where the covering is carried on horizontal purlins supported by rafters or cross walls—purlins shall be fixed on edge and shall not be smaller than— 75mm by 50mm for spans up to 1400mm; 100mm by 50mm for spans up to 2400mm; 150mm by 50mm for spans up to 4000mm; or sizes approved by the District Planning Authority for spans over 4000mm; purlins shall be nailed to each rafter with 2 nails each embedded at least 40mm into each piece of timber and joints in purlins shall be over rafters or walls; purlins shall be fixed—under each and overlap of the sheets covering the roof; and in no case shall they be fixed more than 1200mm apart.

For double pitched roofs with framed truss the type of truss shall be approved by the District Planning Authority. Alternatively ridge plates could be used with rafters fixed on both sides and opposite each other. The size of ridge plates shall depend on the span and shall in no case be less than 175mm by 25mm. Rafters shall be cut to fit the ridge plate and shall be nailed to it with not less than three nails embedded at least 25mm in each piece of timber. Where hip rafters are used they shall not be less than 175mm by 50mm and jack rafters shall be fixed to the hip rafters in the same way as ordinary rafters are fixed to ridge plates. Where the roof covering consists of tiles of cement slates, timber framing shall be considered to satisfy regulation if—for roofs where the covering is to be cement slates, the spacing of the rafters from centre to centre are approved by the District Planning Authority; for roofs where the covering is to be flat tiles the rafters are 24mm deeper than for a roof where cement slates are used, i.e 25mm by 50mm instead of 100mm by 60mm; where flat tiles are used the spacing of the rafters is not greater than that permitted for cement plates under paragraph of this sub-regulation; and

for roofs where the covering consists of half round tiles the battens to which the tiles are nailed are carried on purlins spanning between the trusses of the roof and the size and spacing of these purlins and of the trusses are approved by the District Planning Authority.

Coverings for pitched roofs shall—be capable of sustaining the expected loads without failure or undue deflection; prevent the entry of rain; and be securely fixed to the members which support them. Where lightweight coverings are used they shall consist of—galvanized steel sheets; or aluminium sheets; or cement or plastic sheets; or translucent sheets used either alone or in combination with other sheets. Where heavy roof coverings are used they shall consist of— concrete tiles; or burnt clay tiles; or corrugated asbestos sheets. No means may be provided by which occupants of the house or other persons can obtain access to the upper surface of any covering to a pitched roof except for maintenance work. A light-weight covering shall be considered to satisfy subregulation of this regulation—if the slope of light weight metal sheet coverings to roofs is not less than—one in six (1:6) in the case of monopitched roofs where each sheet extends the whole length from the top to the bottom of the slope; one in four (1:4) where the end lap of sheet is at least 225mm; or one in three (1:3) where the end lap of sheets is at least 150mm; or if the slope of cement or plastic coverings to roofs is not less than—one in six (1:6) in the case of mono-pitched roofs where each sheet extends to the whole length from the top to the bottom of the slope; one in four (1:4) where the end lap of sheets is at least 300mm; one in three (1:3) where the end lap of sheets is at least 250mm; one in two and a half (1:2.5) where the end lap of sheets is at least 200mm; or one in two (1:2) where the end lap of sheets is at least 150mm.

Where ridging is used it should extend over the sheets for at least—300mm where the slope of the roof is not less than one in four (1:4); or 225mm where the slope of the roof is not less than one in three (1:3). The overlap at the sides of sheets shall not be less than one and a half corrugations in the case of corrugated sheets; in other cases the overlap shall be to the satisfaction of the District Planning Authority. At each side lap the overlying sheet shall be the one nearer to the direction from which the rain-carrying wind usually blows. Where a covering abuts against a parapet or other wall or chimney there shall be provided a metal flashing that complies with the following—Galvanized steel shall be corrugated and not thinner than 0.45mm; the sheets shall be fixed; to angle-iron purlins with galvanized hook bolts; to tubular steel purlins with U bolts at lap joints and eaves and with J bolts at intermediate purlins; or

to timber purlins with sheradized drive screws or other equivalent; each sheet shall

be fixed to every purlin which is beneath it, and washers shall be used with every bolt or nail; hook bolts or drive screws shall not be less than 6mm diameter and shall be spaced not more than 0.3m apart and fixed through the top of the corrugations with drive screws penetrating at least 40mm into the purlins; washers for the purpose shall be made of aluminium or galvanised steel and curved to render the hole weatherproof.

The ridge cap and hip caps, if any, shall be secured to the purlins by the same means as the sheeting is secured and shall have a lap of at least 150mm; and the lap on the ridge caps shall be arranged to protect the joint from the rain-carrying wind; the hip cap, if any, shall be secured to the hip purlins by the same means as the sheeting, and the lap shall be at least 225mm; aluminium corrugated sheets used shall not be thinner than 0.5mm; aluminium sheets shall not make contact with any other metal; and the washers, drive screws and bolts for use with them shall be of aluminium, or where this is not possible, galvanized steel or bituminous based washers or flashing may be used; aluminium shall be separated from concrete or mortar bituminous based material or suitable timber or timber based product; aluminium sheets, ridge caps and hip caps shall be fixed in the same way as corrugated steel sheets in accordance with the provisions of this regulation; aluminium troughed sheet shall not be thinner than 0.6mm; shall be fixed in accordance with the manufacturer's instructions and to the satisfaction of the District Planning Authority.

For the purposes of this regulation where plastic sheets are corrugated or of angular section, they shall not be less than 4mm thick; and the sheets shall be fixed in the following manner—to angle iron purlin with galvanized hook bolts; to timber purlins with galvanized drive screws; to every purlin which is beneath it with not less than two bolts or screws and a diamond galvanized washer shall be used with each bolt or screw; hook bolts or drive screws shall be at least 4mm nominal diameter, and long enough to penetrate the purlins at least 40mm and spaced not more than 300mm apart; a hole of at least 3mm larger in diameter than the bolt of screw shall be drilled through the top of corrugation over the middle of wooden purlins or the side angle iron purlins and no hole shall be within 40mm of the edge of any sheet; diamond galvanized washers or other washers approved for the purpose shall be used so as to render the hole weather-proof.

The bolt or screw shall be tightened sufficiently only to seat the washer over the corrugation, so that the roof covering may move slightly relative to the framing without damaging the sheeting; at side laps, the overlapping sides shall be finished with a down turned edge; and the under-lapping side with an up turned edge, and at each side lap, the overlying sheet shall be the one nearer to the direction from which the rain-carrying wind usually blows; the ridge caps and hip caps, if any, shall be secured to the purlins by the same means as the sheeting and have a lap of at least 150mm; and the lap on the ridge cap shall be arranged to protect the joint from the rain-carrying wind; the overhang of the bottom edge of the sheet beyond the lowest purlin shall not exceed 225mm, and the side overhang of sheet shall not exceed 150mm beyond the gable wall; where roof lights are required translucent sheets shall be used and fixed in the same way as similar shaped sheets; and where proprietary roof lights are used they shall conform to the manufacturer's instructions.

Roof boards or ladders shall always be used when conducting inspection or maintaining roof coverings. A heavy covering and corrugated asbestos sheets shall be considered as satisfying this regulation if—rectangular tiles are set with the top and bottom edges being horizontal; the width of the tiles is not less than half the length; the thickness is at least 4mm and the dry density is not less than 17 kg/m³; the slope of the roof in column 2 corresponds with the related width of tile in column 1 as follows—

300mm or more one in two (1:2); 200mm to 250mm one in one and half slope; below 200mm special permission needed and greater slope; the whole of the roof is covered by two thickness of tiles at eaves overhang by not less than 50mm and are formed with an extra course of tiles; (e) the overhang at a gable end is not more than 50mm and the outside row of tiles is bedded in mortar mix C in Schedule 3 Table B; and the tiles are hung by means of a fixing lug at the top end.

Where a roof covering abuts against a wall or chimney there shall be provided a metal flashing in accordance with the provisions of this regulation with necessary modification, and at ridges and hips, the tiles shall maintain the proper laps, ridge and hip coverings which shall be of burnt clay, concrete or cement.

Where flat tiles are used—

1. the thickness of the tiles shall be at least 12mm;
2. the slope of the roof shall be not less than 1 in 1 or 45°;
3. the end lap shall not be less than 75mm;
4. eaves shall overhang by not less than 50mm and shall be formed with a tilting fillet and a second course of tiles; and
5. the overhang at gable ends shall not exceed 75mm.

Where high winds are not expected, the tiles in each third row shall be nailed to the battens with two nails to each tile and the nails shall be 40mm long in copper or cast iron metal. Where a tile roof covering abuts against a wall or chimney there shall be provided a metal flashing as described in this regulation. Where half-round tiles are used—

- the thickness of the tiles shall be at least 12mm;
- the slope of the roof shall not be less than 1 in 1 1/2;
- the lap shall not be less than 75mm;
- eaves overhang shall not be less than 50mm and the bottom course shall be bedded in mortar mix C;
- tiles shall be nailed to battens set on the slope of the roof under each row of overtiles and the size of these battens shall vary with the size of the tile;
- undertiles shall be nailed near the top of the battens on each side and overtiles nailed to the top of the battens with one nail to each tile; the nails shall be copper or galvanised steel or aluminum nails at least 90mm for the overtiles and 50mm for the undertiles.

Where a roof is covered with half round tiles and abuts against a wall or chimney there shall be provided a metal flashing in accordance with this regulation. Every external wall, including any parapet of a habitable building in which persons are intended to be habitually employed in any external walls manufacture, trade or business including warehouses shall be so constructed as to adequately resist the penetration of rain, insects and vermin and other rodents from the ground to the inner surface of any storey structures of the building. Approved throated copings shall be provided to every wall where the wall is carried above the roof flat or gutter, so as to form a parapet. Soakers, flashings or cement filleting shall be provided where the tiling or other covering of the roof is in contact with a parapet or other wall or chimney stack carried up above such roof.

Aluminium roofing shall not be built into or directly brought in contact with cement and cement products, unless protected by an approved construction method. No person shall construct underground habitable rooms unless the District Planning Authority grants approval in writing. No service ducts or pipework shall be buried wholly or partially in a loadbearing structural element such as beam, column slab or wall without approval by the District Planning Authority. All demolition works shall be conveyed to the District Planning Authority or the police prior to the commencement of the demolition works and it shall be ensured that sufficient warning is given to the public of the danger posed by the works.

Dust arising from demolition work shall be controlled so as not to create nuisance or danger to the health of the general public. Sufficient precautions shall be taken to safeguard public safety, health and adjoining properties.

Every District Assembly shall ensure that the maintenance cycle of all buildings and other structures are adhered to. All surfaces which require to be painted shall be so painted. Subregulation shall apply to both internal and external surfaces of walls, ceilings, piers or columns and all other surfaces which require painting for their preservation and durability. All paint work shall be executed in accordance with the manufacturers' directions. A District Assembly shall have the power to request a building owner to paint or carry out maintenance on his premises, if in the opinion of the authority that premises pose a health hazard to the occupants and disturbs the beauty and harmony of the environment. Where the property owner fails to carry out such request, the District Assembly shall cause the painting or the maintenance or both to be carried out and the cost of all expenses incurred in the work charged to the property owner or the residents if the duty of maintaining the property rests with them.

SCHEDULE 5 **Regulation 45**

Rules for Determining the Dimensions of Certain Timber Members

Interpretation of this Schedule—

In this Schedule—"flat roof" includes a roof the pitch of which is 5cm or less to the horizontal;"spacing" means the distance between the centres of any two adjacent timber members of the same type, measured in a plane parallel to the plane of the floor, ceiling or roof structure of which each such member forms part;"span" means the distance between the centres of any two adjacent bearings or other forms of support given to a timber member, measured in a plane parallel to the plane of the floor, ceiling, or roof structure of which the member forms part; and "timber member" means a piece of solid timber of any of the types more particularly specified in the headings to the tables to this Schedule.

Special Treatment of Timber

Timber used in the construction of roof or fixed within a roof, including any ceiling joist within the void spaces of the roof, shall be adequately treated with a suitable preservative to prevent infestation by wood borers (*hylotrupes bajulus*-L). The requirements for special treatment of timber shall be considered satisfied if—the timber is treated in accordance with the provisions of Ghana Standards or BS 4072: 1966; or the timber, when freshly felled and milled and having an average moisture content of not less than 50% of its overdry mass, is treated by diffusion with sodium borate to produce a net dry salt retention of not less than 5.3 kg/cubic metre of boric acid equivalent; or the timber is completely immersed for not less than ten minutes in an organic solvent type wood preservation solution containing not less than 0.5% gamma HC, dieldrin or other persistent organochlorine contact insecticide and any surfaces subsequently exposed by cutting the timber for fitting in the building are thoroughly treated by dipping, spraying or brushing those surfaces with the same type of preservative.

The dimensions of a timber member may be determined by reference to the appropriate table to this Schedule if—in the case of a member of a type to which any one of Table I to 12 of this Schedule relates, the member either consists of Ghanaian timber; or in the case of a floor board to which Table I of this Schedule relates—the board complies in all respects with BS 1297: 1970; and the span of the board does not exceed the dimension specified in Table 1 of this Schedule having regard to its finished thickness; and the imposed load to be sustained by the floor, ceiling or roof of which the timber member forms part does not exceed the load specified in regulations 34 and 35(3).

Refer to pdf file for tables

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